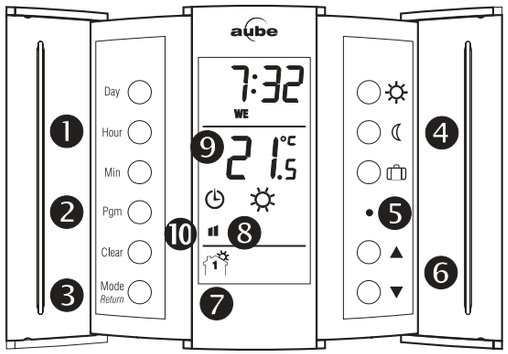
Control Module TH132 A/F/AF

Owner's Guide

Thank you for choosing the Aube TH132, a programmable thermostat that provides both energy savings and total comfort.



***WARNING:** This control module has 20-second cycles and must be installed ONLY with a TRIAC relay.*

TH132 Description

1. DAY/HOUR/MIN—Set the day and clock settings.
2. PGM—Program the schedule (programs).
3. MODE—Select the operating mode.
   RETURN—To exit a function.
4. To configure temperature setpoints:
   ☼ Comfort, ☾ Economy and 💼 Vacation.
5. Adjust the floor temperature limit (AF only).
6. ▲▼—Increase and decrease temperature.
7. —Indicates the number of the current program when Automatic mode is enabled.
8. Current operating mode (auto ◷ / manual). In Auto mode, the program's associated setpoint icon is also displayed (☼ ☾).
9. Indicates the room OR floor temperature.
10. Heating indicators (see "Temperature Control" below).

Models Overview

TH132-A

This model has been designed to control a room's ambient temperature.

The TH132-A has one temperature sensor located in the control module.

TH132-AF

This model is designed to use a floor sensor to control the room temperature.

The TH132-AF has two temperature sensors:

- The first one, installed in the control module, controls the ambient temperature.
- The second one, installed in the floor (and connected to the power base), limits the temperature of the floor (the default setting of this limit is 82°F).

TH132-F

This model is designed to control floor heating systems.

The TH132-F has one temperature sensor installed in the floor (sensor is connected to the power base).

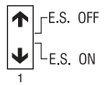
1 Configure the Switches

The TH132 has two switches, located on the upper-left part on the rear of the control module, which are used to set the following options:

Early Start

When the Early Start function is enabled (disabled by default), the TH132 calculates the optimum system start time to obtain the desired temperature by the set time. To enable this function:

- Position switch #1 down.



***Note:** When this function is enabled, the system can be activated before the program's start time.*

Temperature Display

By default, the TH132 displays the temperature in °C. If you wish to change to °F:

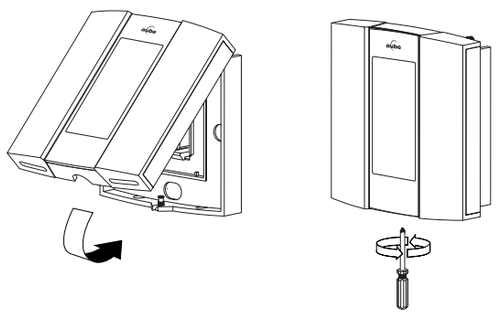
- Position switch #2 up.

***Note:** When you switch from °C to °F or vice versa, the ☼, ☾ and 💼 setpoints must be redefined.*

2 Install the Control Module

Align the bracket tabs on the control module with the holes located on top of the power base.

This control module must be installed on a PB130-024T series power base.



***Note:** Keep the thermostat's air vents clean and free from obstructions.*

***Note:** The screw cannot be removed completely.*

First Power ON

On the first installation, the screen displays: 0:00, MO, and temperature (room/floor).

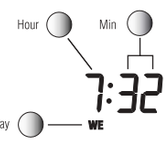
For Floor Heating Installations:

One of the two following messages may be displayed when a problem occurs:

LO: The floor temperature is below 32°F (0°C), or the temperature sensor is defective, or not connected.
The heating indicator is displayed and the relay is closed (energized).

HI: The floor temperature is above 140°F (60°C), or the temperature sensor is defective.

3 Set the Time and Day



1. Set the time (HOUR - MIN).
2. Set the day (DAY).

If you remove the module from its base for more than 2 hours, the time and day will have to be reprogrammed.

4 Adjust the Temperature Setpoints

Comfort ☼ and Economy ☾ Setpoints

These setpoints are associated with the schedule's programs (prog. 1 & 3 = Comfort, prog. 2 & 4 = Economy) and are preprogrammed as follows:

- A & AF models— ☼ 68°F, ☾ 64°F
- F model— ☼ 82°F, ☾ 68°F

To modify a setpoint:

1. Set the temperature using ▲▼ and press and hold the ☼ or ☾ button until it is displayed on the screen.
2. Press MODE/RETURN to exit.

Vacation Setpoint 💼

The vacation setpoint is associated to the Vacation operating mode and is preprogrammed to 50°F. To modify this setpoint, repeat above steps.

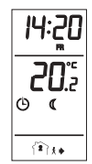
Floor Temperature Setpoint (AF model only)

The floor temperature limit is preprogrammed to 82°F to avoid damage to your floor.

To modify, press the adjustment button (below 💼) using a pointed object, set the desired temperature using ▲▼ and press MODE/RETURN to exit.

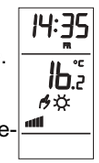
5 Select the Operating Mode

The TH132 offers three operating modes:



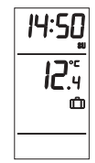
Automatic ◷—Executes the schedule.

1. Press MODE to select ◷. The current program number is displayed.
   You can temporarily bypass the current program by setting a specific temperature setpoint ▲▼ or by selecting one of the pre-defined setpoint buttons (☼ ☾). The new setpoint will be maintained until the beginning of the next program.



Manual —Maintains a constant temperature.

1. Press MODE to select .
2. Set temperature ▲▼ or select one of the pre-defined setpoint buttons (☼ ☾).



Vacation 💼—Maintains the Vacation setpoint during a prolonged absence.

- Press 💼.

6 Program Your Schedule

The schedule is used with the Automatic mode. The schedule controls the heating system to automatically switch between the Comfort and Economy temperature setpoints at the times you have programmed.

The schedule consists of 4 programs per day defined as follows:

Programs	Setpoint	Time [i]
	☼	Wake-up
	☾	Leave home
	☼	Back home
	☾	Night

i. The programs' start time can be different for each day of the week.

To enter the programs' start time

To shorten programming, you simply have to enter the start time for each program.

1. Press PGM.
2. Press DAY to select the day (hold for 3 seconds to select all days of the week).

Note: It is sometimes faster to program the same schedule for the entire week and then to modify the exception days.

3. Press PGM to select the program number (e.g. 1).
4. Press HOUR and MIN to set the start time.
5. Repeat steps 3 to 4 for remaining programs (e.g. 2, 3 and 4).
6. Press MODE/RETURN to exit.

Note: After 60 seconds of inactivity, the thermostat will automatically exit programming mode.

To clear a program time:

When you clear a program time entry, the TH132 will maintain the temperature setpoint of the last executed program until the beginning of the next program.

1. Repeat steps 1 to 3 above.
2. Press CLEAR to erase the time entry. The time portion of the LCD indicates --:-- when the program is inactive.
3. Press MODE/RETURN to exit.

Programming Example

Programs		MO	TU	WE	TH	FR	SA	SU
	☼	6:00	6:00	6:00	6:00	6:00	6:00	6:00
	☾	8:30	8:30	8:30	8:30	8:30	--:--	--:--
	☼	16:00	16:00	16:00	16:00	16:00	--:--	--:--
	☾	23:00	23:00	23:00	23:00	23:00	23:00	23:00

☼ Comfort :

- Monday to Friday, between 6:00 and 8:30 and between 16:00 and 23:00.
- Saturday and Sunday, between 6:00 and 23:00.

☾ Economy :

- Monday to Friday, between 8:30 and 16:00 and between 23:00 and 6:00.
- Saturday and Sunday, between 23:00 and 6:00.

To program this schedule

1. Press PGM.
2. Press and hold DAY for 3 seconds to select all days of the week.
3. Press PGM to select program 1.
   Set the time (6:00) using the HOUR and MIN buttons.
4. Press PGM to select program 2.
   Set the time (8:30) using the HOUR and MIN buttons.
5. Repeat step 4 for remaining programs:
   program 3 (16:00) and program 4 (23:00).
6. When all programs are configured, press MODE/RETURN to exit.

To erase programs 2 and 3 for Saturday and Sunday

1. Press PGM.
2. Press PGM to select program 2.
3. Press DAY to select SAturday (SA).
4. Press CLEAR to erase the time (--:--).
5. Press DAY to select SUnday (SU).
6. Press CLEAR to erase the time (--:--).
7. Press PGM to select program 3.
8. Repeat steps 3 to 6.
9. Press MODE/RETURN to exit.

Temperature Control

The TH132 thermostat works differently than conventional electromechanical thermostats.

It is equipped with a proportional integral adaptive (PIA) controller which determines heating cycles by analyzing the temperature behavior history within the room.

The PIA controller reduces temperature swings providing accurate temperature control while increasing user comfort.

The controller determines the amount of power required by the heating system to maintain the setpoint temperature.

When the heating system is activated, one of the following icons is displayed:

1 to 20%	21 to 40%	41 to 60%	61 to 80%	81 to 100%

Technical Specifications

Model: TH132 A / AF / F

Display range: 32°F to 140°F (0°C to 60°C)

Setting range (ambient): 40°F to 86°F (5°C to 30°C)

Setting range (floor): 40°F to 104°F (5°C to 40°C)

Pre-programmed temperature setpoints:

- **Comfort**: A/AF: 68°F (20°C) and F: 82°F (28°C)
- **Economy**: A/AF: 64°F (18°C) and F: 68°F (20°C)
- **Vacation**: A/F/AF: 50°F (10°C)
- **Floor limit**: AF: 82°F (28°C)

Temperature resolution display scale: 0.1°

Storage:-4°F to 120°F (-20°C to 50°C)

Software: Class A

Controller: Electronic

Temperature control: Proportional integral adaptive, 20-second heating cycles

Programming protection: Protected memory

Clock protection: 2 hours

Size (H/W/D): 3.3 x 3.1 x 0.5 in (83 x 79 x 13 mm)

Warranty

AUBE TECHNOLOGIES INC. TWO (2) YEAR LIMITED WARRANTY

This product is guaranteed against workmanship defects for a two-year period following the initial date of purchase. During this period, AUBE Technologies Inc. will repair or replace, at our option and without charge, any defective product which has been used under normal conditions.

The warranty does not cover delivery costs and does not apply to products poorly installed or randomly damaged following installation.

This warranty cancels and replaces any other manufacturer's express or implied warranty as well as any other company commitment. AUBE Technologies Inc. cannot be held liable for related or random damages following the installation of this product.

The defective product as well as the purchase invoice must be returned to the place of purchase or mailed, prepaid and insured, to the nearest shipping address.

If you have any questions concerning the programming of the TH132 programmable thermostat, call our technical support team at:

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For more information on our products, visit us at:
www.aubetech.com

ENERGY STAR

As an ENERGY STAR® partner, Aube Technologies has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

20/04/2004 400-132-012-A

PB130-024T

Installation Instructions

24 V Low Voltage Power Base

1 Introduction

The PB130-024T power base is designed to power a TH13X Series control module. This low voltage power base can be used to drive a line voltage load using a relay or connect directly to equipment (such as a hot water system) using a 24 V signal.

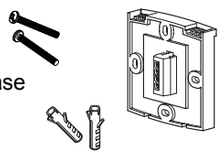
Although the PB130-024T is compatible with most relays, it has been optimized for use with an Aube relay. Aube offers triac relays (SSR) such as the RT850 and RT850T (with built-in 24 V transformer), and electromechanical relays such as the RC840 and RC840T (with built-in 24 V transformer).

2 Installation Guidelines

Cut power to the heating system at the main power panel to avoid electrical shock. Installation should be carried out by an electrician.

- For a new installation, choose a location about 5 ft. (1.5 m) above the floor.
- The thermostat should be installed facing the heating system and on an inside wall.
- Avoid locations where there are air drafts (top of staircase, air outlet), dead air spots (behind a door), direct sunlight or concealed chimneys or stove pipes.

3 Included Parts



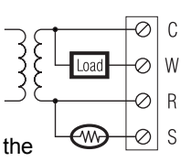
1. One (1) PB130-024T low voltage power base
2. Two (2) anchors
3. Two (2) mounting screws

4 Installation Steps

1. Connect the base. See the typical wiring diagrams.

   a) Electric heating (figures 1, 2 and 3)
   - Connect the base to the relay:
     - Use a relay with a built-in 24 V transformer or
     - Use a relay and an external 24 V transformer.
   - Connect the relay to the load (see relay's instructions).

   b) Hot water heating (figure 4)
   - Connect the base to the 24 V valve of the water heating system.



2. For a floor heating installation, connect the floor sensor between the S and R terminals.
3. Push the excess wire into the wall and secure the base using the provided screws and wall anchors.
4. **Before** mounting the control module onto the base, select the heating cycle, set the switches (if necessary) and mount the control module. Refer to the control module's user guide for more information.
5. Once the control module is configured (switches) and installed, return power to the heating system.

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Figure 1: Single unit

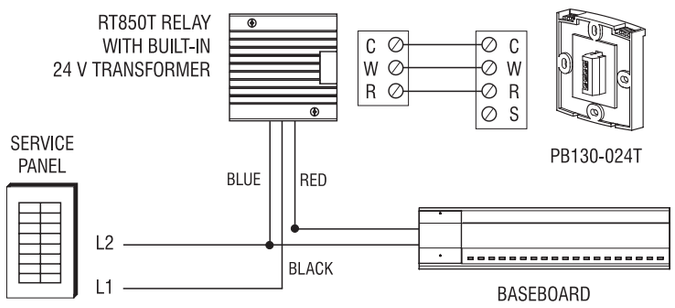


Figure 2: Multiple units

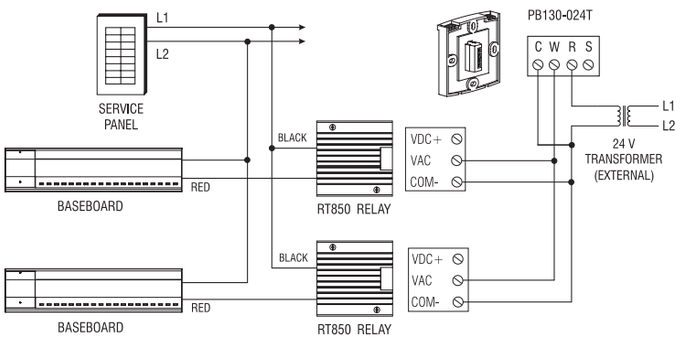
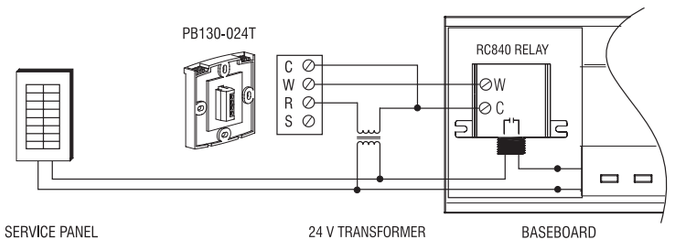
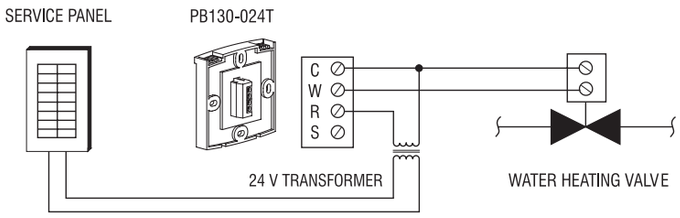


Figure 3: Single unit, relay inside baseboard



NOTE: The RC840T relay with built-in 24 V transformer is also available.

Figure 4: Connection to a water heating valve



Technical Specifications

Maximum load: 0.5 A / 24 VAC
Operating temperature: 32°F to 122°F (0°C to 50°C)
Storage: -4°F to 122°F (-20°C to 50°C)
Size (H • W • D): 2.94 x 2.94 x 0.53 in. (74.6 x 74.6 x 13.3 mm)
Wire gauge: 14 to 22 AWG

If you have any questions concerning the PB130-024T low voltage power base, call our technical support team at:

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